

§ 162.161-1

46 CFR Ch. I (10-1-12 Edition)

(d) Prior to shipboard testing, the independent laboratory must ensure that the BWMS supplied by the manufacturer is installed in a vessel in accordance with the OMSM and the vessel's administration's requirements and can be tested in accordance with § 162.060-28 of this subpart.

(e) Prior to commencing land-based or shipboard testing required under this subpart, the independent laboratory must require the BWMS manufacturer to sign a written statement to attest that the system was properly assembled and installed at the test facility or onboard the test vessel.

(f) The independent laboratory or its subcontractor(s) must conduct all approval testing and evaluations in accordance with testing requirements of this subpart and within the range or rated capacity of the BWMS.

(g) Upon completion of all approval tests and evaluations, the independent laboratory must follow the requirements of § 162.060-34 of this subpart and forward a complete Test Report to the Commanding Officer, U.S. Coast Guard Marine Safety Center, 2100 2nd St. SW., Stop 7102, Washington, DC 20593-7102, or by email to msc@uscg.mil.

[USCG-2001-10486, 77 FR 17311, Mar. 23, 2012, as amended by 77 FR 33970, Jun. 8, 2012]

Subpart 162.161—Fixed Clean Agent Fire Extinguishing Systems

SOURCE: USCG-2006-24797, 77 FR 33886, Jun. 7, 2012, unless otherwise noted.

§ 162.161-1 Scope.

(a) This subpart applies to each engineered fixed fire extinguishing system using a halocarbon or an inert gas as an agent. It does not apply to pre-engineered systems.

(b) Each system must be designed for protection against fires in both Class B flammable liquids and Class C energized electrical equipment, as those hazard classes are defined in NFPA 2001 (incorporated by reference, see § 162.161-2).

(c) Each system must meet the requirements of this subpart, be listed or approved by an independent laboratory approved by the Coast Guard and listed at <http://cgmix.uscg.mil/>, bear the mark

of the laboratory, and be approved by the Coast Guard under 46 CFR 159.005-13.

§ 162.161-2 Incorporation by reference.

(a) Certain material is incorporated by reference into this subpart with the approval of the Director of the Federal Register under 5 U.S.C. 552(a) and 1 CFR part 51. To enforce any edition other than that specified in this section, the Coast Guard must publish a notice of change in the FEDERAL REGISTER and the material must be available to the public. All approved material is available for inspection at U.S. Coast Guard, Office of Operating and Environmental Standards (CG-OES), 2100 2nd Street SW., Stop 7126, Washington, DC 20593-7126, and is available from the sources indicated in this section, and is available from the sources listed below. It is also available for inspection at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202-741-6030 or go to http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html.

(b) International Maritime Organization (IMO), Publications Section, 4 Albert Embankment, London SE1 7SR, United Kingdom, telephone +44 (0)20 7735 7611, www.imo.org.

(1) MSC/Circ. 848, Revised Guidelines for The Approval of Equivalent Fixed Gas Fire-Extinguishing Systems, as Referred to in SOLAS 74, for Machinery Spaces and Cargo Pump-Rooms (June 8, 1998), (“MSC/Circ. 848”), IBR approved for § 162.161-6.

(2) MSC.1/Circ. 1267, Amendments to Revised Guidelines for the Approval of Equivalent Fixed Gas Fire-Extinguishing Systems, as Referred to in SOLAS 74, for Machinery Spaces and Cargo Pump-Rooms (MSC/Circ. 848) (June 4, 2008), (“MSC.1/Circ. 1267”), IBR approved for § 162.161-6.

(c) National Fire Protection Association (NFPA), 1 Batterymarch Park, Quincy, MA 02169-7471, telephone 617-770-3000, <http://www.nfpa.org>.

(1) NFPA 2001, Standard on Clean Agent Fire Extinguishing Systems, 2008 Edition, (“NFPA 2001”), IBR approved for §§ 162.161-1 and 162.161-3.

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(2) [Reserved]

(d) Underwriters Laboratories, Inc. (UL), 333 Pfingsten Road, Northbrook, IL 60062, telephone 847-272-8800, *www.ul.com*.

(1) UL 2127, Standard for Safety for Inert Gas Clean Agent Extinguishing System Units (Revised March 22, 2001), (“UL 2127”), IBR approved for §§ 162.161-5, 162.161-6 and 162.161-7.

(2) UL 2166, Standard for Safety for Halocarbon Clean Agent Extinguishing System Units (Revised March 22, 2001), (“UL 2166”), IBR approved for §§ 162.161-5, 162.161-6 and 162.161-7.

§ 162.161-3 Materials.

(a) All system components must meet the requirements of NFPA 2001 (incorporated by reference, see § 162.161-2) and be made of metal, except for bushings, o-rings, and gaskets. Aluminum or aluminum alloys may not be used.

(b) Metal components must:

(1) Have a solidus melting point of at least 1700 °F;

(2) Be corrosion resistant; and

(3) Be galvanically compatible with each adjoining metal component, or if galvanically incompatible, be separated by a bushing, o-ring, gasket, or similar device.

(c) Each extinguishing agent must be:

(1) Listed as an acceptable total flooding agent for occupied areas on the Environmental Protection Agency’s Significant New Alternative Products (SNAP) list, 40 CFR part 82, subpart G, Appendix A; and

(2) Identified as an extinguishing agent in NFPA 2001 (incorporated by reference, see § 162.161-2).

(d) The extinguishing concentration of extinguishing agent required for each system must be determined by the cup burner method, described in NFPA 2001 (incorporated by reference, see § 162.161-2), for the specific fuel requiring the highest extinguishing concentration.

(e) The design concentration of the agent required for each protected space must be calculated using a safety factor of 1.3 times the extinguishing concentration. The quantity must be calculated at the minimum expected am-

bient temperature using the design concentration based on either:

(1) Gross volume, including the casing, bilge, and free air contained in air receivers; or

(2) Net volume, calculated as shown in NFPA 2001 (incorporated by reference, see § 162.161-2), including the casing, bilge, and free air contained in air receivers, if one of the following is satisfactorily performed:

(i) Full discharge test; or

(ii) Enclosure integrity procedure in accordance with Annex C of NFPA 2001; for discharge or enclosure integrity tests, the minimum concentration hold time must be 15 minutes, and the extinguishing agent concentration at the end of the hold time must be at least 85 percent of the design concentration.

(f) If fuel can drain from the compartment being protected to an adjacent compartment or if the compartments are not entirely separate, the quantity must be sufficient for both compartments.

§ 162.161-4 Construction.

(a) Each pressure vessel must comply with 46 CFR 147.60(a) and (b).

(b) Each system must be capable of operation without an external power source.

(c) Manual actuation for the system must be by mechanical or pneumatic means.

(d) Automatically actuated systems must be released by pneumatic or fusible element detection systems.

(e) Each system installed with the extinguishing agent cylinders stored inside a protected space of 6,000 cubic feet or less must use automatic actuation as the primary means of actuation and have a remote backup manual mechanical actuator.

(f) Each container charged with nitrogen must have a pressure gauge.

§ 162.161-5 Instruction manual for design, installation, operation, and maintenance.

(a) The manufacturer must prepare a system instruction manual for design, installation, operation, and maintenance of the system. The manual must be reviewed and accepted by an independent laboratory listed in 46 CFR